APPENDIX A

CLEAN VERSION OF SUBSTITUTE SEQUENCE LISTING
(Application Serial No. 10/028,075)

amdtC

SEQUENCE LISTING

<110> Nisar A.
Benner, Robert

<120> Gene regulator

<130> 2183-5223US

<140> 10/028,075
<141> 2001-12-21

<150> EP 01203748.7
<151> 2001-10-04

<160> 175

<170> PatentIn Ver. 2.1

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Gly Cys Pro Arg Gly Val Asn Pro Val Val Ser Tyr Ala Val Ala Leu
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Ser Cys Gln Cys Ala Leu
35

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Cys Pro Thr
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signalling molecule

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His Pro Leu Thr Cys
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Thr Cys

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signalling molecule

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20 25 30

Pro Ile Leu Pro Gln
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pdb/1RLQ/1RLQ-R; swissnew/P01229/LSHB HUMAN

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pdb/1GBR/1GBR-B

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1 5

<210> 87
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<210> 88
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<210> 96
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Cys

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Cys

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Leu Asp Ser Leu
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Val Leu Gln Ala Ile Leu Pro Ser Ala Pro Gln
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1 5

<210> 105
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Lys Val Leu Gln Gly Arg Leu Pro Ala Val Ala Gln Ala Val
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<223> Description of Artificial Sequence: Mm.129320.2

<400> 108
Leu Val Gln Lys Val Val Pro Met Leu Pro Arg Leu Leu Cys
1 5 10

<210> 109
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Mm.129320.2

<400> 109
Leu Pro Arg Leu
1

<210> 110
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Mm.129320.2

<400> 110
Pro Met Leu Pro
1

<210> 111
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Mm.22430.1

<400> 111
Pro Ser Ala Pro Gln
1 5

<210> 112
<211> 11
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: P20155

<400> 112
Leu Pro Gly Cys Pro Arg His Phe Asn Pro Val
1 5 10

<210> 113
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Rn.2337.1

<400> 113
Leu Val Gly Cys Pro Arg Asp Tyr Asp Pro Val
1 5 10

<210> 114
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Rn.2337.1

<400> 114
Leu Val Gly Cys
1

<210> 115
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Hs.297775.1

<400> 115
Pro Gly Cys Pro Arg Gly
1 5

<210> 116
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Mm.1359.1

<400> 116

Leu Pro Gly Cys Pro
1 5

<210> 117
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
sptrembl/O56177/O56177

<400> 117
Val Leu Pro Ala Ala Pro
1 5

<210> 118
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
sptrembl/Q9W234/Q9W234

<400> 118
Leu Ala Gly Thr Ile Pro Ala Thr Pro
1 5

<210> 119
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
sptrembl/Q9W234/Q9W234

<400> 119
Pro Ala Thr Pro
1

<210> 120
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
sptrembl/Q9IYZ3/Q9IYZ3

<400> 120
Gly Leu Leu Pro Cys Leu Pro
1 5

<210> 121
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
sptrembl/Q9PVW5/Q9PVW5

<400> 121
Pro Gly Ala Pro
1

<210> 122
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
sptrembl/Q9PVW5/Q9PVW5

<400> 122
Leu Pro Gln Arg Pro Arg Gly Pro Asn Pro
1 5 10

<210> 123
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
sptrembl/Q9PVW5/Q9PVW5

<400> 123
Pro Arg Gly Pro
1

<210> 124
<211> 4
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Hs.303116.2

<400> 124
Gly Cys Pro Arg
1

<210> 125
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
pdb/1DU3/1DU3-A

<400> 125
Gly Cys Pro Arg Gly Met
1 5

<210> 126
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: pdb/1BIO/1BIO

<400> 126
Leu Gln His Val
1

<210> 127
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
pdb/1FL7/1FL7-B

<400> 127
Val Pro Gly Cys
1

<210> 128
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
pdb/1HR6/1HR6-A

<400> 128
Cys Pro Arg Gly
1

<210> 129
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:pdb/1H6/1HR6-A

<400> 129
Leu Lys Gly Cys
1

<210> 130
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: pdb/1BFA/1BFA

<400> 130
Pro Pro Gly Pro
1

<210> 131
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: pdb/1BFA/1BFA

<400> 131
Leu Pro Gly Cys Pro Arg Glu Val
1 5

<210> 132
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: pdb/1BFA/1BFA

<400> 132
Cys Pro Arg Glu
1

<210> 133
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
swissnew/P01229/LSHB HUMAN

<400> 133
Met Met Arg Val Leu Gln Ala Val Leu Pro Pro Leu Pro Gln Val Val
1 5 10 15

Cys

<210> 134
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
swissnew/P01229/LSHB HUMAN

<400> 134
Met Met Arg Val
1

<210> 135
<211> 6
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence:
swissnew/P01229/LSHB HUMAN

<400> 135
Val Leu Pro Pro Leu Pro
1 5

<210> 136
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
swissnew/P01229/LSHB HUMAN

<400> 136
Val Leu Pro Pro Leu Pro Gln

1 5

<210> 137
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
swissnew/P01229/LSHB HUMAN

<400> 137
Ala Val Leu Pro Pro Leu Pro
1 5

<210> 138
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
swissnew/P01229/LSHB HUMAN

<400> 138
Ala Val Leu Pro Pro Leu Pro Gln
1 5

<210> 139
<211> 17
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence:
swissnew/P07434/CGHB PAPAN

<400> 139
Met Met Arg Val Leu Gln Ala Val Leu Pro Pro Val Pro Gln Val Val
1 5 10 15

Cys

<210> 140
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
swissnew/P07434/CGHB PAPAN

<400> 140
Leu Gln Ala Gly
1

<210> 141
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
swissnew/P07434/CGHB PAPAN

<400> 141
Val Leu Pro Pro Val Pro
1 5

<210> 142
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
swissnew/P07434/CGHB PAPAN

<400> 142
Val Leu Pro Pro Val Pro Gln
1 5

<210> 143
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
swissnew/P07434/CGHB PAPAN

<400> 143
Ala Val Leu Pro Pro Val Pro
1 5

<210> 144
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:

swissnew/P07434/CGHB PAPAN

<400> 144
Ala Val Leu Pro Pro Val Pro Gln
1 5

<210> 145
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
swissnew/Q28376/TSHB HORSE

<400> 145
Met Thr Arg Asp
1

<210> 146
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
swissnew/Q28376/TSHB HORSE

<400> 146
Gln Asp Val Cys
1

<210> 147
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
swissnew/Q28376/TSHB HORSE

<400> 147
Ile Pro Gly Cys
1

<210> 148
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
sptrembl/Q9Z284/Q9Z284

<400> 148
Pro Ala Leu Pro Ser
1 5

<210> 149
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
sptrembl/Q9UCG8/Q9UCG8

<400> 149
Leu Pro Gly Gly Pro Arg
1 5

<210> 150
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
sptrembl/Q9UCG8/Q9UCG8

<400> 150
Leu Pro Gly Gly
1

<210> 151
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
sptrembl/Q9UCG8/Q9UCG8

<400> 151
Gly Gly Pro Arg
1

<210> 152
<211> 4
<212> PRT

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: XP_028754

<400> 152
Leu Gln Arg Gly
1

<210> 153
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: XP_028754

<400> 153
Leu Gln Arg Gly Val
1 5

<210> 154
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: XP_028754

<400> 154
Leu Gly Gln Leu
1

<210> 155
<211> 13
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: SignalP (CBS)

<400> 155
Met Thr Arg Val Leu Gln Gly Val Leu Pro Ala Leu Pro
1 5 10

<210> 156
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: HLA molecule

type I (A_0201)

<400> 156
Val Leu Gln Gly Val Leu Pro Ala Leu
1 5

<210> 157
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: HLA molecule type I (A_0201)

<400> 157
Gly Val Leu Pro Ala Leu Pro Gln Val
1 5

<210> 158
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: HLA molecule type I (A_0201)

<400> 158
Val Leu Pro Ala Leu Pro Gln Val Val
1 5

<210> 159
<211> 9
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: HLA molecule type I (A_0201)

<400> 159
Arg Leu Pro Gly Cys Pro Arg Gly Val
1 5

<210> 160
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: HLA molecule type I (A_0201)

<400> 160
Thr Met Thr Arg Val Leu Gln Gly Val
1 5

<210> 161
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: MHC II (H2-Ak 15-mers)

<400> 161
Cys Pro Thr Met Thr Arg Val Leu Gln Gly Val Leu Pro Ala Leu
1 5 10 15

<210> 162
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: MHC II (H2-Ak 15-mers)

<400> 162
Pro Gly Cys Pro Arg Gly Val Asn Pro Val Val Ser Tyr Ala Val
1 5 10 15

<210> 163
<211> 15
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: HLA-DRB1*0101 15-mers

<400> 163
Pro Arg Gly Val Asn Pro Val Val Ser Tyr Ala Val Ala Leu Ser
1 5 10 15

<210> 164
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: HLA-DRB1*0101
15-mers

<400> 164
Thr Arg Val Leu Gln Gly Val Leu Pro Ala Leu Pro Gln Val Val
1 5 10 15

<210> 165
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: HLA-DRB1*0101
15-mers

<400> 165
Leu Gln Gly Val Leu Pro Ala Leu Pro Gln Val Val Cys Asn Tyr
1 5 10 15

<210> 166
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: HLA-DRB1*0301
(DR17) 15-mers

<400> 166
Met Thr Arg Val Leu Gln Gly Val Leu Pro Ala Leu Pro Gln Val
1 5 10 15

<210> 167
<211> 15
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: HLA-DRB1*0301
(DR17) 15-mers

<400> 167
Ser Ile Arg Leu Pro Gly Cys Pro Arg Gly Val Asn Pro Val Val
1 5 10 15

<210> 168
<211> 7
<212> PRT

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NMPF-56
peptide

<400> 168
Val Ala Pro Ala Leu Pro Gln
1 5

<210> 169
<211> 35
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NMPF-62
peptide

<400> 169
Val Val Cys Asn Tyr Arg Asp Val Arg Phe Glu Ser Ile Arg Leu Pro
1 5 10 15

Gly Cys Pro Arg Gly Val Asn Pro Val Val Ser Tyr Ala Val Ala Leu
20 25 30

Ser Cys Gln
35

<210> 170
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NMPF-67
peptide

<400> 170
Cys Pro Arg Gly Val Asn Pro
1 5
<210> 171
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NMPF-70
peptide

<400> 171

Met Thr Arg Val Leu Gln Gly Val Leu Pro Ala Leu Pro Gln
1 5 10

<210> 172
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NMPF-75 peptide

<400> 172
Ser Lys Ala Pro Pro Pro Ser Leu Pro Ser Pro Ser Arg Leu Pro Gly
1 5 10 15

Pro Cys

<210> 173
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NMPF-56 peptide

<400> 173
Val Ala Pro Ala Leu Pro Gln
1 5

<210> 174
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NMPF-71 peptide

<400> 174
Met Thr Arg Val Leu Pro Gly Val Leu Pro Ala Leu Pro Gln Val Val
1 5 10 15

Cys

<210> 175
<211> 9

<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NMPF peptide

<400> 175
Cys Arg Gly Val Asn Pro Val Val Ser
1 5